



STATE OF WASHINGTON

## STATE BUILDING CODE COUNCIL

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### MINUTES MECHANICAL, VENTILATION AND ENERGY CODES COMMITTEE

**Date:** March 11, 2010

**Location:** SeaTac City Council Chambers, SeaTac

**MVE Committee Members Present:** Mari Hamasaki, Chair; Kristyn Clayton; Jerry Mueller; John Cochran; Tien Peng; Dale Wentworth

**Visitors Present:** Duane Jonlin, John Hogan, Kraig Stevenson, Chuck Murray, Pete Crow, Garrett Huffman, Charles de Montigny

**Staff Present:** Tim Nogler, Krista Braaksma, Joanne McCaughan

#### CALL TO ORDER

Mari Hamasaki, Chair of the Mechanical, Ventilation and Energy Codes Committee, called the meeting to order at 9:10 am. Everyone was welcomed and introductions were made.

#### REVIEW AND APPROVE AGENDA

The agenda was approved with the addition of review of the code change proposals received for the Energy Code and Mechanical Code.

#### ENERGY CODE STRATEGIC PLAN UPDATE AND REPORT

Chuck reported on E2SSB 5854, which assigned the Council the task of energy use reduction through energy codes, with the goal of achieving a 70% reduction by 2031 using 2006 as a baseline. The bill assigned the Department of Commerce the work of the strategic plan and implementation development project. The department is to develop and implement a strategic plan for enhancing energy efficiency and reducing greenhouse gas emissions from homes, buildings, districts, and neighborhoods; to direct future code increases; and to examine the barriers to getting to a net zero energy building stock. The first report to the legislature is due

December 31, 2010. The strategic plan must include recommendations to the SBCC on energy code upgrades.

The bill directs the MVE Committee to work with the Council to develop a workgroup that will advise on the initial development of the strategic plan. The MVE Committee will recommend who should be in the workgroup.

Chuck discussed the subsections of the bill in which the legislature provided the department with specific direction for the strategic planning effort.

Section 3 states that the strategic plan must include recommendations from the Council on energy code upgrades, requiring the Council to review and recommend measures to be adopted in 2013. This work will involve identifying the data needed to vet the measures. This is high priority in the list of items defined in the bill. This is one of several areas which will require workshops where stakeholders can inform the process.

Section 3(3a) directs Commerce to consider development of aspirational codes separate from the state energy code that contain economically and technically feasible optional standards. One member asked what aspirational means in this context. The response was that it refers to standards developed by the utilities that establish targets beyond code, and often have utility incentives to encourage people to adopt and use the aspirational codes.

Chuck reported that other states are also requiring the development of aspirational codes. Oregon requires the development of a Reach Code, which will be published as an addition to the baseline code, which is understood to be 15% above the next edition of their energy code. Massachusetts has completed a “stretch” energy code. Aspirational codes are similar to attempts made to define a green building code and an energy efficient home in statute.

Chuck indicated that there would need to be a decision and a policy recommendation about whether the aspirational code should be included as an appendix to the state energy code. If the aspirational code was published in some form, the Council could provide preliminary guidance on how it would be implemented in a report to the legislature and the governor.

Kristyn asked if it would result in a change to RCWs, and the response was that it could be.

The aspirational code is what the code might look like in three to six years, which allows people and industries to plan for that and concentrate efforts on products or markets. The aspirational code could be updated every three years as people met the targets.

Section 3(3b) directs Commerce to determine the appropriate methodology to measure achievement of the state energy code targets using the US EPA Target Finder program or an equivalent methodology. This item has two parts: how will the targets going to be measured, and the establishment of what the targets are.

The legislature has focused on Target Finder as a methodology, which implies a type of energy utilization index and measured reductions in energy use. The Council needs to carefully examine whether this is the best methodology for the work of examining a large population of buildings, not just individual projects. Two alternative candidates would be US DOE's methodology for evaluating the progress in commercial building codes. DOE has developed a set of representative buildings for each climate zone, and they apply the new code requirements to this set of buildings and run a simulation to determine what the change is from the previous code to the new code.

The NW Power and Conservation Council uses a methodology that is very similar and does the measurement evaluation over time, for single family residences and small apartments.

Tien asked if meeting this requirement of the bill would this support the federal requirement for states to have a method of performance evaluation. Chuck answered, yes and no. Recovery Act funding requires states to demonstrate 90% compliance within eight years with most the recent edition of the I-Code for residential and 91% compliance for commercial buildings. This exercise is more about first developing the baseline energy use in buildings for the 2006 code, and then setting targets for each code cycle to incrementally improve over time.

This work is high priority, and Chuck will work closely with the Energy Code TAG. Chuck also noted the workshops would get feedback from anyone who chose to participate.

Tien asked whether Washington could get feedback from Oregon and Massachusetts about their processes, and the answer was yes.

Mari asked Chuck how the recommendations would be developed, and he responded that it would be a challenge and that the process would reveal differences in opinion.

Mari asked who would develop a hybrid methodology if it turned out to be needed, and Chuck responded that if a hybrid methodology was needed, given the resource constraints, the outcome would likely be a budget request. The strategic plan will outline that and identify action items.

There was discussion about whether to have progress reports at MVE Committee meetings or SBCC meetings, and general consensus that the Committee would be the best place. There was also discussion about who would do the work – the MVE Committee or a new work group formed with members of the Committee and the Energy Code TAG. The initial product is a report to the legislature by December, which would need Council approval.

Chuck will develop a proposal for the work process. Many of the constituent groups indicated an interest in being involved during the development of the legislation.

Chuck moved onto the subsection concerning the need for enhanced code training and enforcement. This item is frequently cited as a method to improve consumption, but providing staff with enough time, funding, and the authorizing environment to provide detailed code enforcement is also important. Training to support the building industry participants is also important.

Workshops and outreach to local governments can address this requirement. The goal is to identify gaps in code implementation, and develop a strategy to close the gaps. There will also be a plan for short-term and long-term code enforcement training, including a detailed training scope and a proposed budget. The work will evaluate local government needs, and gather commentary from local governments on obstacles to participation in increasingly detailed and complex energy code enforcement.

The work will also be to examine alternate enforcement models such as circuit riders. One member asked what these were. The response was that there previously was a program administered by the state in which three persons were responsible for educating and assisting architects, engineers, and others on the energy code.

Section 3(3d) directs Commerce to include state strategies to support research demonstration and education programs that will help achieve the incremental improvement required by the code. Chuck explained that achieving a 70 percent energy reduction will require large-scale change. An example of having done this before is the utility programs that occurred in the early 1980s, with many demonstration projects. The Building America program is an example of this now. Within the Department of Commerce, this is currently emphasis placed on green jobs and industry development. The question is, how can we leverage the work of organizations including the universities, the Washington Clean Energy Leadership Council, and the Washington Technology Center. This activity is a broad scoping activity that will identify the resources available, and also the needs assessment for research and development to move forward. .

Section 3 (3e) addresses education, focused on the trades and building professionals. Chuck suggested that the work on this item could align with the major strategic planning effort underway in the state with respect to job and labor development.

Section 3 (3f) address barriers for utilities to serve net zero energy homes and buildings. This is a long term project which will involve a number of utility representatives discussing how they serve homes that do not create revenue. This is low priority.

Section 3(3g) asks Commerce to address the limits of a prescriptive code in achieving a net zero energy code, and proposes a transition to performance based codes. There are two concepts of a performance based code. The one that the Council currently follows utilizes energy modeling software to show that a building's predicted energy consumption or cost is equal to or level to the baseline target. An alternative is that performance is taken to mean evaluation of the actual energy use of the building based on an energy use target.

The challenge of this section is how to develop code enforcement methods. There also needs to be a benefits analysis on the adoption of performance based codes. Chuck reported that he does not expect to propose implementation of a performance based code this year, but would recommend workshops to get input.

John commented there are already some net zero homes and buildings, but isn't the net zero target for the year 2031? Chuck answered that the legislation directs Commerce to plan for serving net zero homes and thus to encourage them. Jerry lives in a net zero home.

Section 3 (3h) concerns identifying financial mechanisms such as tax incentives and rebates to motivate energy consumers to take action to increase energy efficiency. Commerce has been instructed to develop a broader base state energy strategy, and there are already key staff assigned to this particular topic. Chuck expressed that the Council can leverage the Commerce strategic plan for this item.

Section 3 (3i) concerns addressing the adequacy of education and technical assistance, including school curricula, technical training, peer to peer exchanges, for professional and trade audiences. This work is about doing a needs assessment of education needs and will be developed further. The Workforce Development Council has already conducted surveys in this area, and may be a resource.

Section 3 (3j) addresses developing strategies to develop and install district and neighborhood wide energy systems to help meet the net zero goal. There is already significant research in this area, and will be primarily a scoping and research project.

Section 3 (3k) directs Commerce to identify costs and benefits of energy efficiency measures on residential and non-residential construction, and is a high priority item. Mari asked how Chuck was planning on getting this information. Chuck responded that it will likely require several workshops and the development of methodologies that are generally accepted. To the extent possible, the work will begin to implement those methodologies. The key outcome is a discussion and consensus about the best way to do this work, and has a close link to the other work of the Council.

Section 3 (3l) concerns investigating methodologies and standards for the measurement of embodied energy used in building materials. Chuck has ranked this as a low priority scoping exercise. One member indicated that King County has already created a tool to evaluate embodied energy.

The scope of the legislation is not limited to these items. For instance, the Council may want to address the transition to the International Code Standards in relation to the progress of state goals, and discuss the benefits and challenges of that change.

Dale asked if there could be a timeline or a sequence to the meetings required as a result of the strategic plan. Tim indicated that he would work with Chuck on this item.

Mari asked if many of the workshops would take place in the next three months, and Chuck agreed that in some cases, it would be necessary to have both an early workshop and then one at the end of the process.

Tim indicated that Commerce would response for budgeting for the plan that goes to the legislature. However, there might be certain deliverables that require an additional budget item.

Mari recommended that the MVE Committee should meet monthly on Thursdays before the Council meeting in part to manage this work.

#### **Motion #1:**

**Kristyn Clayton moved to amend the schedule to have an MVE Committee meeting on the second Thursday of every month throughout the rest of the year, to begin on April 8<sup>th</sup>, in the SeaTac area. John Cochran seconded the motion. The motion passed unanimously.**

Mari asked if there were any audience questions about the strategic plan discussion.

Eric Lohnes of the Building Industry Association of Washington asked what percentage beyond code the aspirational code would be. Chuck responded that generally the aspirational code would be equal to the requirements of the three or six years out.

John Hogan of the City of Seattle commented about the evaluation of the energy savings and whether to use the DOE methodology. There are two requirements, one that affects receipt of stimulus money and the other is complying with the Energy Policy Act of 1992. Using DOE methodology would also fit in with those processes.

It was also noted that NEEC is currently working to put together webinars on the WSEC.

Duane Jonlin commented that the conversation about performance based code should be the first priority, because adopting such a code would make all the other pieces “dramatically simpler.”

#### **IECC ADOPTION WORKPLAN**

Tim distributed a draft work plan to the members. The work is to identify amendments necessary to adopt the International Energy Conservation Code, and the plan provides a detailed timeline, beginning this summer. The goal is to have a document by June 20, 2011 that could be reviewed by this committee and be submitted for public input. The document would be a base code to work from. March 1, 2012 is the deadline for proposed code changes. Rulemaking, beginning after that date in 2012, would involve a TAG review. The work of developing the document would be done by staff.

Mari asked if there were any comments on the proposed work plan. One member commented that it seemed to be well thought through.

Tim explained that there was legislation this session which amended the State Energy Code Act, and this work plan would follow the directive of that legislation by reviewing of the International Energy Conservation Code.

Kristyn felt there were several items, including identifying barriers to the plan she thought should be included in the work plan.

**Motion #2:**

**John Cochran moved that the work plan be approved as submitted. Jerry Mueller seconded the motion. The motion passed, with one opposing vote.**

Mari asked for public comments. John Hogan from the City of Seattle commented that it's not clear to him whether this is the entire work plan or just the IECC part of work plan. He recommended that the Council look at the 2013 challenge. He added that proposals to the ICC that would go into effect in 2016 had to be submitted last year, creating a seven year lag between submittal and implementation.

**ADJOURNMENT**

There being no further business, the meeting was adjourned at 11:25 a.m.